

Remarks/Arguments:

Claims 1, 3-7, 9, 10, 12-15, 17-20, 22, and 23 were pending in this application. With this Amendment, the applicants propose to add claims 24 and 25. Accordingly, upon entry of these claims, claims 1, 3-7, 9, 10, 12-15, 17-20, 22-25 will now be the pending claims in this application. Support for newly added claims 24 and 25 can be found in the application as originally filed in the Examples and at page 5, line 38.

Claims 1, 3, 5-7, 12, 13, and 17-21 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,228,800 to Yamaguchi et al. ("Yamaguchi"). Claims 1, 10, 12, and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,013,173 to Bogdan ("Bogdan"). Dependent claims 4, 14, and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Yamaguchi in view of U.S. Patent No. 3,549,720 to Wright et al. ("Wright"). Finally, dependent claims 9 and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bogdan. Applicants contend that the pending claims as amended overcome the rejections of record.

There are two independent claims in the present application, claim 1 and claim 12. Claim 1 recites a catalyst with particular features, and claim 12 recites a process for the hydrogenation of a hydrogenatable organic compound comprising the step of passing a mixture of a gaseous feed containing that compound and hydrogen over a catalyst having certain features. Claims 1 and 12 further state that the catalyst:

consists essentially of a palladium compound supported upon a support material selected from the group consisting of titania, magnesia, alumina, silica-alumina, a calcium-aluminate cement and mixtures thereof and a compound of a lanthanide, wherein the palladium is present at a level in the range of about 50 ppm to about 1% by weight calculated as Pd metal and the weight of the total catalyst.

Applicants maintain the arguments previously made with respect to the primary references, Yamaguchi and Bogdan. As stated previously, Yamaguchi fails to disclose the range of palladium present in an amount of about 50 ppm to about 1% by weight with sufficient specificity to rise to the level of anticipation. Second, Yamaguchi fails to specify the inclusion of a lanthanide compound such that the lanthanide compound can be "at once envisaged from Yamaguchi." In addition, Bogdan requires a Group IVA metal and indium which are

characterized as "essential ingredients," and applicants contend that these constituents would materially affect the basic and novel characteristics of the claimed invention.

Moreover, newly-added claims 24 and 25 further distinguish from the cited references as they recite a palladium level in an amount between about 50 ppm and 1000 ppm.

Turning to the second point made previously with respect to Yamaguchi, Yamaguchi specifies a broad range of "basic metal salts" which can be used in the catalyst of Yamaguchi. In particular, the "basic metal salt component" of Yamaguchi can be either an alkali metal, an alkaline earth metal or a rare earth metal. In addition, none of the Examples use a lanthanide compound; instead, all of the examples use as the basic metal salt component are either Na, K or Mg, referring to the table above. The broad range of choices of basic metal salt is repeated many times in the description and claims of Yamaguchi, for example at column 3, line 55 through 56; column 6, lines 65 and 66; column 8, line 54; column 11, lines 13 through 15; and claims 7 through 10. Rare earth metal compounds are just one selection from this list, and lanthanum and cerium are mentioned only once, at column 6, line 56.

Accordingly, the situation can be analogized to a genus-species situation, described in MPEP § 2131.02. In view of the breadth of genus is disclosed, and because none of the claimed species are used in the examples of that reference, the claimed species cannot be deemed to be "at one envisaged" from the broad description set forth in the reference. Moreover, the reason for the use of the basic metal salt in Yamaguchi is different from that in the claimed invention, and there is no reason provided as to why a lanthanide would achieve the purposes of Yamaguchi. More specifically, Yamaguchi uses the basic metal salt to alter the distribution of palladium within the carrier, as specified at column 7, lines 61 through 67:

The production process of this invention is based on the principle that the palladium component is insolubilized and immobilized by a chemical reaction between the soluble palladium compound and the basic metal salt component of at least one metal selected from the group consisting of alkali metals, alkaline earth metals and rare earth metals previously supported on a carrier.


Other than its listing, there is no evidence in Yamaguchi that the incorporation of a lanthanide into a palladium catalyst influences its selectivity for hydrogenation reactions. The Examples demonstrating use of the catalyst compare a Pd-Pb catalyst (Example 3) with a Pd catalyst

(Comparative Example 2) and a Pd-Bi catalyst (Example 7). None of these catalysts contains a lanthanide, as discussed above.

Turning to Bogdan, the applicants maintain their previous arguments. In addition, the applicants note that the limitation of claim 1 specifying the level of palladium previously appeared in claim 8 as of the Office Action of September 30, 2008. Claim 8 was not rejected based on Bogdan, and no mention of the limitation of the palladium level in claim 1 was made in the most recent Office Action of May 11, 2009. For completeness, the applicants note that Bogdan discloses at column 5, lines 26-30, that the platinum group metal generally will comprise about 0.01% to about 2 mass-% of the catalytic composite. The lowest percentage of platinum in the Examples is 0.37%, which corresponds to 3700 ppm. This is a value above the range specified by new claims 24 and 25, further distinguishing these claims from Bogdan.

In view of the foregoing amendments and remarks, the applicants respectfully request reconsideration and allowance of this application.

Respectfully submitted,



Christopher R. Lewis, Reg. No. 36,201
Attorney for Applicants

CRL/lrb

Dated: August 6, 2009

P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

The Director is hereby authorized to charge or credit Deposit Account No. **18-0350** for any additional fees, or any underpayment or credit for overpayment in connection herewith.

L:\H:\WRPORTBL\RP\USA\490738_1.DOC